

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code:2162508****Date:22/01/2021****Subject Name:Metal Forming Technology****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
<b>Q.1</b>	(a) Define a) Slip b) Twinning	<b>03</b>
	(b) Explain the factors affecting the strain rate	<b>04</b>
	(c) Explain the differences of hot and cold working processes in detail.	<b>07</b>
<b>Q.2</b>	(a) Describe various Rolling defects.	<b>03</b>
	(b) Explain the process of Ring rolling with a neat sketch	<b>04</b>
	(c) Explain Two-High, Three-High & Four-High Rolling Mill with neat sketch.	<b>07</b>
<b>Q.3</b>	(a) Explain working of planetary rolling mill with sketch.	<b>03</b>
	(b) Mention some of the advantages of forging over casting process.	<b>04</b>
	(c) Explain the piercing method of pipe and tube manufacturing by extrusion.	<b>07</b>
<b>Q.4</b>	(a) Classify various types of forging process.	<b>03</b>
	(b) Write a short note on forging defects.	<b>04</b>
	(c) Differentiate Forward and backward Extrusion in detail with sketch.	<b>07</b>
<b>Q.5</b>	(a) Explain Cold Heading process.	<b>03</b>
	(b) What is Bending? Compare Edge bending, V-bending and U-bending.	<b>04</b>
	(c) Sketch and Compare Wire Drawing with Rod/Bar Drawing.	<b>07</b>
<b>Q.6</b>	(a) Explain Rotary Swaging process	<b>03</b>
	(b) Differentiate between coining and embossing process.	<b>04</b>
	(c) Explain Open and Closed Die Forging processes.	<b>07</b>
<b>Q.7</b>	(a) Distinguish between Blanking and Piercing process.	<b>03</b>
	(b) Sketch and explain Deep drawing.	<b>04</b>
	(c) Explain the principle of Hydrostatic Extrusion process with a neat sketch.	<b>07</b>
<b>Q.8</b>	(a) Classify the sheet metal forming process.	<b>03</b>
	(b) Write a short note on metal forming process with its merits and demerits.	<b>04</b>
	(c) Mention the process steps involved in high velocity forming of metals and bring out its positive features, limitations and applications.	<b>07</b>

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